

Remarks/Arguments:

The abstract has been objected to by the Examiner. The abstract has therefore been amended to a single paragraph that contains less than 150 words. Furthermore, the amended abstract does not contain any legal phraseology or numerical characters. No new matter has been added.

Figure 19 has been objected to because the characters 311-313 are not described in the specification. Features 311-313 are three frames of a sequence of frames 311-31N and 321-32N disclosed in figure 19 of the specification. These frames are furthermore described on page 50 lines 10-12 of the specification. Thus, amendments to the specification have been made to include characters which refer to these sequences of frames. No new matter has been added.

Claims 1-28 are pending in the above-identified application. Claims 3-28 have been cancelled. Claims 41 and 42 have been newly added. Claims 1, 5, 9, 17, 18 and 19 have been rejected under U.S.C. 112. Claim 1 has been amended to show that "communication price" is a price charged to a terminal in exchange for use of transmission band. The rejection to claims 5, 9, 17, 18 and 19 is moot in view of their cancellation. Withdrawal of the 112 rejection is respectfully requested. Claims 1-4, 9-13, 14, 17 and 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwata (USPN 5,933,425).

Independent claim 1 recites a data processing method where pieces of information such as schedules of usage, availability and price of communication on a transmission band are exchanged between a plurality of terminals. These features are recited in claim 1 as ("*schedule of usage...schedule of the transmission band which is available...communication price*"). Furthermore, claim 1 goes on to recite the **partial reserving or exchanging of the transmission band** ("*transmission band is partially assigned or partially exchanged*").

Stated in the specification on page 20 lines 24-25, there is a partial reserving or exchanging of the transmission band ("*data relay processing unit 100 makes it possible to assign or exchange a part, or all, of the band*"). Partial reserving or exchanging is needed to efficiently manage the utilization of the transmission band. An example of partial reserving of the transmission band is shown in figure 2 of the specification. In this example the entire transmission band can accommodate transmissions up to 15 Mbps. Terminal unit A has a

partial rate of 10 Mbps reserved between 0 and 5 hours. Terminal unit B has a partial rate of 5 Mbps reserved during the same time period. In this reservation, all of the available transmission band is utilized efficiently. Furthermore, partial exchange of the transmission band is shown in figure 3 of the specification. Figure 3 shows terminal unit A communicating at a rate of 10 Mbps with server 1 before the exchange. It also shows terminal unit B communicating at a rate of 10 Mbps with server 2 before the exchange. After the partial exchange of transmission band, terminal unit A communicates at 8 Mbps with server 1 and 2 Mbps with server 2. Terminal unit B communicates at 2 Mbps with server 1 and 8 Mbps with server 2. In this exchange the overall 10 Mbps transmission requirement of terminal A and B is satisfied by partially exchanging transmission band between server 1 and 2.

Iwata, in column 5 lines 24-37, teaches a system that routes **all** the user data through a single path where it meets quality of service (QOS) constraints of the user such as transmission rate ("*20 Mbps is specified as a QOS parameter...select the path A-B-E*"). Iwata, however, does not teach the efficient utilization of available system bandwidth by means of **partially** reserving or exchanging transmission band. Just because the demand of the user is met as in Iwata, that does not mean the available bandwidth of the system has been utilized efficiently. By partially reserving or exchanging transmission band it is possible to satisfy the demand of the user and also to utilize the available bandwidth efficiently.

Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Newly added claim 41 recites a transmission band being assigned or exchanged based on stored information ("*transmission band available to be assigned...is assigned or exchanged or exchanged with an other terminal based on the information stored in respective terminals*"). Newly added claim 42 recites a term where transmission band is available to be assigned or exchanged ("*schedule of a term where a transmission band is available to be assigned or exchanged*").


Claims 2, 41 and 42 include all the features of claim 1 from which they depend. Thus, claims 2, 41 and 42 are also patentable over the art of record for the reasons set forth above.

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In view of the amendments and arguments set forth above, the above identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



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Attachment: Abstract

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ABSTRACT

A data relay processing method where an available transmission band is partially reserved, partially assigned or partially exchanged between multiple communication terminals. Pieces of information are communicated between the multiple terminals. Such information includes a schedule of a term in which the transmission band is available, and a communication price that is charged to terminals in exchange for the usage of the transmission band. A schedule of transmission band usage and history of transmission band usage are utilized to efficiently reserve, assign or exchange the transmission band.